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09/689,104	10/12/2000	Masashi Nogawa	TIJ-28802	6438

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EXAMINER

NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
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2673

10

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/689,104

Applicant(s)

NOGAWA, MASASHI

Examiner

Jimmy H. Nguyen

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 12-19 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-19 and 21-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 15.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This Office Action is made in response to applicant's amendment filed on 11/13/2003 (entered into the file wrapper as Paper No. 14). Claims 12-19 and 21-27 are currently pending in the application. An action follows below:

2. The indicated allowability of claims 17, 19 and 25 is withdrawn in view of the newly discovered reference(s) to Shigeo et al. (JP 11-161219), cited in IDS submitted on 11/13/2003. Rejections based on the newly cited reference(s) follow.

#### ***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on 11/13/2003 and entered as paper No. 15 is considered by the examiner.

#### ***Claim Objections***

4. Claim 17 is objected to under 37 CFR 1.75(a) because although this claim meets the requirement 112/2d, i.e., the metes and bounds are determinable, however, the feature, "LEDs" should be changed to -- light emitting diodes (LEDs) --, so as to define the feature consistently with the disclosure, at least once.

It is in the best interest of the patent community that applicant, in his/her normal review and/or rewriting of the claim, to take into consideration these editorial situations and make changes as necessary.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2673

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 12, 13, 23 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Shigeo (JP 11-161219) cited in IDS filed on 11/13/03, hereinafter Shigeo. Please refer to the attached copy of English translation for the following rejection.

As per claims 12 and 13, the claimed invention reads on Shigeo as follows: Shigeo discloses a LED dot matrix display (see fig. 8, page 4, paragraph 0026) comprising a plurality of scan lines (12), a plurality of signal lines (data lines 11) arranged in a matrix, and a plurality of display elements (elements EL) and a circuit (a circuit comprising discharge switches DCSW and a reference potential source 16, see fig. 8) for reducing erroneous activation of the display elements, the circuit comprising a reduced voltage source (a reference potential source 16, see fig. 8) having a voltage less than a voltage (a driving source 15, fig. 8, page 3, paragraph 0014, lines 5-6) used to drive the display elements (ELs), and a discharge circuit (a circuit including discharge switches DCSW, fig. 8) for coupling each of the scan lines to the reduced voltage source (16) at a time when none of the signal lines (11) is activating the display elements (ELs). See page 3, paragraphs 0015-0017, and page 4, paragraphs 0025-0026. Accordingly, the elements in these claims are read in the reference.

Regarding to claim 23, Shigeo further teaches the reduced voltage source (16) is at the reference potential (fig. 8).

Regarding to claim 27, Shigeo further teaches the display elements (ELs) discharged between the start of each horizontal scanning period and a time of increase for each drive signal (page 3, paragraphs 0015-0017).

***Claim Rejections - 35 USC § 103***

Art Unit: 2673

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 14-19, 21, 22 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigeo.

As per claims 14 and 21, as discussed in the rejection above, Shigeo discloses the display, which corresponds to an embodiment as illustrated in fig. 8, comprising all the claimed limitations except for a plurality of LEDs and a plurality of scan line buffer circuits, as recited in claims 14 and 21.

However, Shigeo further teaches a display, which corresponds to another embodiment as illustrated in fig. 10, comprising a circuit, for reducing erroneous activation of the display elements (ELs), including a discharge circuit comprising a plurality of buffer circuits, each buffer circuit including a resistance (62) and a LED (a diode 63, fig. 10) as claimed. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide a plurality of buffer circuits of the embodiment as illustrated in fig. 10, in the discharge circuit of the embodiment as illustrated in fig. 8, in view of the teaching in the Shigeo reference, because this would prevent the switching noise of the discharge switches, as taught by Shigeo (see page 5, paragraph 0031, lines 6-11).

Regarding to claim 15, Shigeo discloses a switch (a discharge switch DCSW/58) coupled between one electrode of each LED (63) and the reduced voltage source (16). See figs. 8 and 10.

Art Unit: 2673

Regarding to claim 16, Shigeo discloses the plurality of LEDs (63) arranged as shown in fig. 10. Shigeo does not disclose expressly the specific arrangement of the LEDs as claimed. Accordingly, Shigeo discloses all the claimed limitation except for the specific arrangement of the LEDs as claimed. However, at the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to arrange the LEDs as presently claimed, since a such modification would have involved a mere change in the location of the LEDs. Applicant has not disclosed that the LEDs arranged in one column of the dot matrix display solves any stated problem, provides an advantage or is used for any particular purpose. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the LEDs disposed either as illustrated in fig. 10 of the Shigeo reference or as presently claimed because the ability of the discharge circuit to perform its function of reducing erroneous activation of the display elements is not effected by the location of the LEDs. Further, a change in location is generally recognized as being within the level of ordinary skill in the art, see **In re Japikse, 86 USPO 70 (CCPA 1950)**. Therefore, while Shigeo may not exemplify particular arrangement of LEDs as presently claimed, one of ordinary skill in the art would found it obvious to arrange the LEDs of the Shigeo display to obtain the invention as specified in claim above.

Regarding to claim 17, this claim is similar to claim 14 except that this claim further recites a feature, "wherein the discharge circuit comprises a plurality of switches, one of the switches being coupled each of the LEDs and the reduced voltage source". Regarding to this feature, Shigeo discloses the discharge circuit comprising a plurality of switches (discharge

Art Unit: 2673

switches DCSW/58), one of the switches being coupled each LED (63) and the reduced voltage source (16). See figs. 8 and 10.

Regarding to claims 18 and 19, as noting in fig. 8, Shigeo further teaches a current source (a current controlling mechanism 19, see fig. 8) coupled between each of the switches (DSW) and the reduced voltage source (16), so as to control the current value, which flows to each light emitting device, in some particular display application (see page 4, paragraph 0025, lines 6-10). Accordingly, Shigeo discloses all the claimed limitations except that the current source coupled between the reduced voltage source (16) and the switch (DSW), rather than the switch (DCSW) in the manner as presently claimed. However, as disclosed by Shigeo, by providing a current source (a current controlling mechanism 19, see fig. 8) coupled between each of the switches (DSW) and the reduced voltage source (16), the current value, which flows to each light emitting device, may be controlled by the display application and the intensity modulation may be performed in many cases (see page 4, paragraph 0025, lines 6-10). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide a current source coupled between each switch (DCSW) and the reduced voltage source (16), in view of the teaching in the Shigeo reference, because this would control the flowing current value and perform intensity modulation in many cases.

Regarding to claim 22, Shigeo further teaches each buffer circuit (62, 63) coupled the respective scan line (12) to a driving voltage source (55).

Regarding to claims 24-26, see the rejection to claim 23 above.

***Response to Arguments***

Art Unit: 2673

9. It is noted Applicant that the claim objections, the rejection under 35 USC 112, second paragraph, and the rejection under 35 USC 102(a), in the last Office Action dated 08/13/2003, are hereby withdrawn in view of the amendment filed on 11/13/2003.

***Conclusion***

10. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 11/13/2003 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.



Art Unit: 2673

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231


**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the Technology Center 2600 Customer Service Office whose telephone  
number is (703) 306-0377.

JHN  
June 21, 2004



Jimmy H. Nguyen  
Examiner  
Art Unit: 2673